

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a **Minor, Industrial** permit. The discharge results from the operation of wood preserving facility. This permit action consists of updating the proposed effluent limits to reflect the current Virginia WQS (effective January 6, 2011) and updating permit language as appropriate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9VAC25-260-00 et seq.

1. Facility Name and Mailing Address: Madison Wood Preservers, Inc.  
216 Oak Park Road  
Madison, VA 22727  
SIC Code : 2491 (Wood Preserving)  
  
Facility Location: 216 Oak Park Drive  
Madison, VA 22727  
County: Madison  
  
Facility Contact Name: Mr. Alan M. Lacy, ENSAT Corp.  
Facility E-mail Address: alacy@ensatems.com  
Telephone Number: 540-825-9083 x2611
2. Permit No.: VA0087696  
Expiration Date of previous permit: 09/29/2013  
  
Other VPDES Permits associated with this facility: None  
  
Other Permits associated with this facility: VWP (WP4-10-1656); Air (Registration No. 40025); Waste (VAD003086360); Tank Registration No. 3010973 (2 USTs/2 ASTs)  
  
E2/E3/E4 Status: NA
3. Owner Name: Madison Wood Preservers, Inc.  
Owner Contact/Title: Mr. Randall Lillard/  
Regulatory Compliance Officer  
Telephone Number: 540-948-6801  
  
Owner E-mail Address: [rlillard@madwood.com](mailto:rlillard@madwood.com)
4. Application Complete Date: 04/22/2013  
Permit Drafted By: Anna Westernik  
Date Drafted: 9/13/2013  
Draft Permit Reviewed By: Alison Thompson  
Date Reviewed: 10/1/2013  
WPM Review By: Bryant Thomas  
Date Reviewed: 10/4/2013  
Public Comment Period : Start Date: 11/08/2013  
End Date: 12/09/2013
5. Receiving Waters Information:  
Receiving Stream Name : Little Dark Run, UT  
Stream Code: 3-XAI  
  
Drainage Area at Outfalls: <1.0 sq.mi.(at both outfalls)  
River Mile: 0.02 (001)  
0.46 (002)  
  
Stream Basin: Rappahannock  
Subbasin: None  
Section: 4  
Stream Class: III  
Special Standards: None  
Waterbody ID: VAN-E15R  
7Q10 Low Flow: 0 MGD  
7Q10 High Flow: 0 MGD  
1Q10 Low Flow: 0 MGD  
1Q10 High Flow: 0 MGD  
30Q10 Low Flow: 0 MGD  
30Q10 High Flow: 0 MGD  
Harmonic Mean Flow: 0 MGD  
30Q5 Flow: 0 MGD

## 6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> State Water Control Law | <input checked="" type="checkbox"/> EPA Guidelines          |
| <input checked="" type="checkbox"/> Clean Water Act         | <input checked="" type="checkbox"/> Water Quality Standards |
| <input checked="" type="checkbox"/> VPDES Permit Regulation | <input type="checkbox"/> Other                              |
| <input checked="" type="checkbox"/> EPA NPDES Regulation    |   |

## 7. Licensed Operator Requirements: NA

## 8. Reliability Class: NA

## 9. Permit Characterization:

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Private | <input type="checkbox"/> Effluent Limited                         | <input type="checkbox"/> Possible Interstate Effect       |
| <input type="checkbox"/> Federal            | <input checked="" type="checkbox"/> Water Quality Limited         | <input type="checkbox"/> Compliance Schedule Required     |
| <input type="checkbox"/> State              | <input type="checkbox"/> Whole Effluent Toxicity Program Required | <input type="checkbox"/> Interim Limits in Permit         |
| <input type="checkbox"/> WTP                | <input type="checkbox"/> Pretreatment Program Required            | <input type="checkbox"/> Interim Limits in Other Document |
| <input checked="" type="checkbox"/> TMDL    | <input type="checkbox"/> e-DMR Participant                        |   |

## 10. Wastewater Sources and Treatment Description:

Madison Wood Preservers is a treatment and storage plant for dimensional lumber using chromated copper arsenate (CCA) for agricultural products and copper azole (commercially known as Wolman E (CA-C)) for residential products. A brief description of these products is provided later within this section of this fact sheet.

Pentachlorophenol was used in the 1960s and 1970s to treat lumber at this location. Please see Section 26 of the Fact Sheet for further discussion on pentachlorophenol.

White lumber is received at the facility by truck. The wood is inspected, sorted, and labeled for processing. Dimensional lumber is treated in one of three cylinders where the CCA or CA-C solutions are introduced into the wood via vacuum. After treatment, the lumber is placed on an elevated drip pad for drying. The drip pad area has secondary containment and an impermeable plastic liner. Any CCA or CA-C product that has dripped from the lumber is captured on the pad, filtered and reused. All processing occurs within a 4.5 acre building. CCA and CA-C products are stored in a tank farm within the main processing area. This area has secondary containment and a synthetic liner underneath it. All chemical loading, mixing, and recycling takes place in this area.

CCA

CCA is a chemical wood preservative containing chromium, copper and arsenic. CCA treatment of wood is used to protect wood from rotting due to insects and microbial agents. CCA has been used to pressure treat lumber since the 1940s. Since the 1970s, the majority of the wood used in outdoor residential settings has been CCA-treated wood. Pressure treated wood containing CCA is no longer being produced for use in most residential settings. Based upon information provided in the Material Safety Data Sheet (MSDS) for CCA dated May 31, 2006, hazardous ingredients include chromic acid, arsenic acid, and copper oxide (see **Attachment 1**).

CA-C

CA-C is a water-based wood preservative that prevents fungal decay and insect attack; it is a fungicide and insecticide. Water-based preservatives leave wood with a clean, paintable surface after they dry. The EPA label approval for CA-C dated April 19, 2012, lists the active ingredients as copper ethanalamine complex, tebuconazole, and propiconazole (see **Attachment 1**).

Discharge from the facility is solely storm water runoff from the 33 acre site that drains to one of two outfalls. There is no treatment for storm water runoff.

Outfall 001

Outfall 001 is located on the southeast side of the property. This outfall receives storm water runoff from a pasture on the opposite side of the receiving stream, Little Dark Run, in addition to upstream sources in the area of the facility.

Outfall 002

Outfall 002 is associated with a storm water retention pond located on the northwest side of the property. The storm water retention pond receives storm water runoff from parking lot areas and Route 29 as well as some roof drainage. This outfall discharges to Little Dark Run, UT.

See **Attachment 2** for the facility schematic/diagram.

See **Attachment 3** for the NPDES Permit Rating Worksheet.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Max 30-day Flow	Outfall Latitude and Longitude
001	Storm Water	None	Variable	38° 22' 21" N 78° 15' 01" W
002	Storm Water	None	Variable	38° 22' 35" N 78° 15' 22" W

See **Attachment 4** for (Rochelle, DEQ #186D and Madison, DEQ#186A) Topographic Maps.

**11. Solids Treatment and Disposal Methods:**

Madison Wood Preservers is a treating and storage plant for dimensional lumber that does not treat domestic sewage and does not produce sewage sludge or industrial solid residuals.

## 12. Discharges Located with Waterbody VAN-E15R

TABLE 2 -- DISCHARGES IN WATERBODY VAN-E15R			
ID/Permit	Facility Name	Latitude/Longitude	Receiving Stream
VPDES Individual Permits			
VA0022845	The Town of Madison WWTP	38° 22' 48" / 78° 14' 11.9"	Little Dark Run
VA0063347	Mountain View Nursing Home	38° 20' 19" / 78° 12' 11"	Great Run, UT
VA0068951	Hartland Institute	38° 20' 13" / 78° 05' 29"	Robinson River
VA0087696	Madison Wood Preservers, Inc.	38° 22' 21" / 78° 15' 01" (Outfall 001)	Little Dark Run, UT
		38° 22' 35" / 78° 15' 22" (Outfall 002)	
Single Family Homes General Permits			
VAG406507	Shifflett Katherine B and Roger L Residence		Dark Run
VAG406303	Haynes C J Residence		Muddy Run

## 13. Material Storage:

TABLE 3 - Material Storage		
Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
DCA Concentrate	10,368 gallons	1
WE Moldicide	9,393 gallons	1
K18 Moldicide	275 gallons	1
CA-C Concentrate	550 gallons	1
Lumbrella	550 gallons	1
Diesel Fuel	2,000 gallons	2
Gasoline	550 gallons	2
15w40 Oil	170 gallons	3
# 32 Hydraulic Fluid	160 gallons	3
# 46 Hydraulic Fluid	55 gallons	3
# 26 Hydraulic Fluid	55 gallons	3
# 68 Hydraulic Fluid	55 gallons	3
Roxanol/Methanal	55 gallons	3
Dexron III Trans Fluid	55 gallons	3
Heating Oil	500 gallons	3
Triple D 40B	55 gallons	3
Detergent Concentrate	Variable	3
Donax TD	55 gallons	3
Hydraulic Fluid	55 gallons	3
Green Coolant	55 gallons	3
Ethylene Glycol	Variable	3

1. Stored inside a containment room inside the site treatment building.
2. Aboveground storage tanks (ASTs) for gasoline and diesel fuel are located under roof in a dike with bermed fueling and off-loading areas.
3. Chemicals used for machine and vehicle maintenance. Stored under roof.

#### 14. Site Inspection:

Performed by Anna Westernik on September 11, 2013 (see **Attachment 5**).

#### 15. Receiving Stream Water Quality and Water Quality Standards:

##### a) Ambient Water Quality Data

Outfall 001 and Outfall 002 discharge into an unnamed tributary to Little Dark Run. This unnamed tributary has not been monitored or assessed by DEQ. The nearest downstream DEQ monitoring station is 3-LDR003.19, located at the Route 643 bridge. This monitoring station is located approximately 0.04 miles downstream of Outfall 001, and approximately 0.48 miles downstream of Outfall 002. The following is the water quality summary for Little Dark Run, as taken from the Draft 2012 Integrated Report\*:

DEQ ambient stations 3-LDR000.70, at Route 680, and 3-LDR003.19, at Route 634.

*E. coli* monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. A bacteria TMDL for the Little Dark Run watershed was completed and approved. The aquatic life, fish consumption and wildlife uses are considered fully supporting.

\*Virginia's Draft 2012 Integrated Report (IR) has been through the public comment period and reviewed by EPA. The 2012 IR is currently awaiting final approval.

##### b) 303(d) Listed Stream Segments and Total Maximum Daily Loads (TMDLs)

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA	TMDL Schedule
<i>Impairment Information in the Draft 2012 Integrated Report<sup>1</sup></i>							
Little Dark Run	Recreation	<i>E. coli</i>	Outfall 001: 0.02 miles  Outfall 002: 0.46 miles	Robinson River Watershed Bacteria 12/12/2005	None <sup>2</sup>	Not expected to discharge pollutant	---

1. Virginia's Draft 2012 Integrated Report (IR) has been through the public comment period and reviewed by EPA. The 2012 IR is currently awaiting final approval.
2. Bacteria is not considered a pollutant of concern for this industrial storm water discharge.

The full planning statement is found in **Attachment 6**.

##### c) Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, Little Dark Run, UT, is located within Section 4 of the Rappahannock River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

It is staff's best professional judgment that with this reissuance as with the 2008 reissuance, monitoring data from Outfall 001 be used to determine water quality criteria. As stated in Section 10 above, Outfall 001 receives storm water runoff from upstream sources associated with the industrial activity. While all

treatment facilities are 100% under cover, there are industrial activities within the drainage area for this outfall that have the reasonable potential to impact stream characteristics leaving the facility. Additionally, the site of the old pentachlorophenol pond is located within the drainage area of Outfall 001.

**Attachment 7** details other water quality criteria applicable to the receiving stream.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/L calcium carbonate). Since the 7Q10 of the receiving stream is zero, storm water data for hardness can be used to determine metals criteria. The average hardness of the discharge from Outfall 001 for the period encompassing the fourth quarter of 2008 through the second quarter of 2013 is 44 mg/L. The hardness-dependent metals criteria in **Attachment 7** are based on this effluent value.

Pentachlorophenol Criteria:

The water quality criteria for pentachlorophenol are dependent on the pH of the receiving stream. Since the 7Q10 of the receiving stream is zero, storm water data can be used in lieu of receiving stream data to determine pentachlorophenol criteria. Per agency guidance, the 10th percentile pH of the effluent from Outfall 001 (6.4 S.U.) was used to determine pentachlorophenol criteria (see **Attachment 6**). Derivation of the 10<sup>th</sup> percentile pH value from the Discharge Monitoring Reports (DMRs) dating from October 2008 to July 2013 can be found in **Attachment 8**.

d) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, an unnamed tributary of Little Dark Run, is located within Section 4 of the Rappahannock River Basin. This section has not been designated with a special standard.

**16. Antidegradation (9VAC25-260-30):**

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 since the critical flows are zero, and storm water runoff comprises most of the discharge. The monitoring endpoints proposed have been established by determining wasteload allocations that will result in attaining and/or maintaining all water quality criteria that apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

**17. Effluent Screening and Wasteload Allocation Development**

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. Since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. Generally, the WLA values are then compared with available effluent data to determine the need for effluent limitations.

However, since these storm water discharges are considered intermittent, the primary concern would be acute water quality impacts. The duration of this discharge is not expected to occur for four or more consecutive days (96 hours). Water Quality Criteria for human health (and chronic toxicity to a lesser degree) are based upon long term, continuous exposure to pollutants from effluents, and storm water discharges are short term and intermittent. Therefore, it is believed that acute criteria should be used to derive the screening criteria.

Screening (i.e., decision) values expressed as monitoring end-points have been established at two times the acute water quality criterion established in the Virginia Water Quality Standards (9VAC25-260 et seq.). There are two primary reasons the end-points are established at two times the criterion. First, the acute criteria is defined as one-half of the final acute value (FAV) for a specific toxic pollutant. The FAV is determined from exposure of the specific toxicant to a variety of aquatic species, and is based on the level of a chemical or mixture of chemicals that does not allow the mortality or other specified response of aquatic organisms. These criteria represent maximum pollutant concentration values, which when exceeded, would cause acute effects on aquatic life in a short time period.

Second, if it is raining a sufficient amount to generate a discharge of storm water, it is assumed that the receiving stream flow will be greater than the critical flows of zero million gallons per day for intermittent streams due to storm water runoff within the stream's drainage area. In recognition of the FAV and the dilution caused by the rainfall, the monitoring end points were calculated by multiplying the acute Water Quality Criteria by two (2). The acute criterion and monitoring end-points established in the permit are presented in Table 4.

Table 4 shows that monitoring end points were established for chromium and copper since it has been determined that a limit at Outfall 001 would be needed if this were not a storm water discharge (see **Attachment 9**). Additionally, monitoring end points were established for arsenic and pentachlorophenol since arsenic is a known constituent of CCA and the facility is in the VRP program due to pentachlorophenol contamination.

Should storm water data for any parameter exceed the established monitoring end points, the permittee shall reexamine the effectiveness of the Storm Water Pollution Prevention Plan (SWPPP) and any best management practices (BMPs) in use (see Parts I.C.2.b 6) e) ii and I.D.11 of the permit) and make modifications as necessary to address any deficiencies that caused the exceedences.

TABLE 4 – Monitoring End Points		
Parameter	Acute Criteria (µg/L)	Monitoring End Point (µg/L) 2 x Acute Criteria
Arsenic	340	680
Chromium VI*	16	32
Copper	6.2	12.4
Pentachlorophenol	9.8	9.6

\*Dissolved chromium shall be used to evaluate the Chromium VI endpoint.

a) Effluent Screening:

Effluent data obtained from the discharge monitoring reports (DMRs) has been reviewed and determined to be suitable for evaluation. Please see **Attachment 10** for a summary of effluent data. The following pollutants require a wasteload allocation analysis: arsenic, chromium, and copper.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:

WLA	= Wasteload allocation
C <sub>o</sub>	= In-stream water quality criteria
Q <sub>e</sub>	= Design flow
Q <sub>s</sub>	= Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
f	= Decimal fraction of critical flow
C <sub>s</sub>	= Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfalls 001 and 002 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C<sub>o</sub>.

c) Effluent Limitations and Monitoring, Pollutants of Concern, Outfalls 001 and Outfall 0021) Pentachlorophenol:

Monitoring data from Outfall 001 is being used to determine water quality criteria (see Part 15. c) of this fact sheet). Staff reevaluated pH data and has concluded it is not significantly different than what was used previously to derive pentachlorophenol criteria. Subsequently, staff used the 10<sup>th</sup> percentile pH data value of 6.3 S.U. from the 2008 permit to calculate pentachlorophenol water quality criteria and WLAs (**Attachment 7**). As a result, monitoring end-points were established for pentachlorophenol and continued monitoring is required for this parameter.

Outfall 001

The Acute Criteria Monitoring End Point for this reissuance is 8.6 µg/L. The monitoring frequency of once every month in which a discharge occurs (1/D-M) shall be carried forward with this reissuance with the ability to reduce monitoring to an annual frequency if this facility has received a Certificate of Satisfactory Completion of Remediation from the Voluntary Remediation Program (VRP) staff, and review of DMR data indicates the facility is below the monitoring end points established with this reissuance for pentachlorophenol. Please see Section 26 of the Fact Sheet for a discussion on monitoring frequency.

Outfall 002

The Acute Criteria Monitoring End Point for this reissuance is 8.6 µg/L. The monitoring frequency of once every six months in which a discharge occurs (1/D-6M) shall be carried forward with this reissuance with the ability to reduce monitoring to an annual frequency if this facility has received a Certificate of Satisfactory Completion of Remediation from VRP staff, and review of DMR data indicates the facility is below the monitoring end points established with this reissuance for pentachlorophenol. Please see Section 26 of the Fact Sheet for a discussion on monitoring frequency.

2) Copper:

As a main component of CCA and CA-C, this parameter must be evaluated for its potential impact on water quality. Monitoring end-points were established for copper with continued monitoring for this parameter.



Outfall 001

Based on a hardness value of 44 mg/L and a calculated Acute Criteria of 6.2 µg/L for copper, the 2x Acute Criteria Monitoring End Point for this reissuance is 12.4 µg/L. The monitoring frequency of once every three months in which a discharge occurs (1/D-3M) shall be carried forward with this reissuance.

Outfall 002

Based on a hardness value of 44 mg/L and a calculated Acute Criteria of 6.2 µg/L for copper, the 2x Acute Criteria Monitoring End Point for this reissuance is 12.4 µg/L. The monitoring frequency of once every six months in which a discharge occurs (1/D-6M) shall be carried forward with this reissuance.

3) Chromium VI:

As a main component of CCA, this parameter must be evaluated for its potential impact on water quality. Monitoring end-points were established for chromium with continued monitoring for this parameter.

Outfall 001

Based on a hardness value of 44 mg/L and a calculated Acute Criteria of 16 µg/L for Chromium VI, the 2x Acute Criteria Monitoring End Point for this reissuance is 32 µg/L. The monitoring frequency of once every three months in which a discharge occurs (1/D-3M) shall be carried forward with this reissuance.

Outfall 002

Based on a hardness value of 44 mg/L and a calculated Acute Criteria of 16 µg/L for Chromium IV, the 2x Acute Criteria Monitoring End Point for this reissuance is 32 µg/L. The monitoring frequency of once every six months in which a discharge occurs (1/D-6M) shall be carried forward with this reissuance.

4) Arsenic:

As a main component of CCA, this parameter must be evaluated for its potential impact on water quality. Monitoring end-points were established for arsenic with continued monitoring for this parameter.

Outfall 001

Based on the Acute Criteria of 340 µg/L for arsenic the 2x Acute Criteria Monitoring End Point for this reissuance is 680 µg/L. The monitoring frequency of once every three months in which a discharge occurs (1/D-3M) shall be carried forward with this reissuance.

Outfall 002

Based on the Acute Criteria of 340 µg/L for arsenic the 2x Acute Criteria Monitoring End Point for this reissuance is 680 µg/L. The monitoring frequency of once every six months in which a discharge occurs (1/D-6M) shall be carried forward with this reissuance.

5) Tebuconazole/Propiconazole/Ethanolamine:

Tebuconazole, propiconazole, and ethanolamine are components of CA-C. Since tebuconazole and propiconazole comprise a small percentage of CA-C, ethanolamine would be present if copper were detected, and all industrial activity is under cover, they are not expected to significantly impact storm water quality. No monitoring for these parameters shall be required unless a site characterization report determines it is needed.

6) Chemical Oxygen Demand (COD):Outfall 001

A review of DMR data from the fourth quarter of 2008 through the second quarter of 2013 indicates maximum and average COD values of 180 mg/L and 78 mg/L. The monitoring frequency of once every three months in which a discharge occurs (1/D-3M) shall be carried forward with this reissuance.

Outfall 002

A review of DMR data from the fourth quarter of 2008 through the second quarter of 2013 indicates maximum and average COD values of 66 mg/L and 44 mg/L. The monitoring frequency of once every six months in which a discharge occurs (1/D-6M) shall be carried forward with this reissuance.

d) Effluent Limitations and Monitoring, Outfall 001 and Outfall 002 – Conventional and Non-Conventional Pollutants

No changes to pH limitations are proposed. pH limitations are set at the water quality criteria.

e) Effluent Limitations, Outfall 001 and Outfall 002 – Storm Water Only Pollutants.

As discussed in Section 17. b) of this fact sheet, Virginia DEQ Guidance Memo 96-001 recommends that chemical water quality-based limits not be placed on storm water outfalls because the methodology for developing limits and the proper method of sampling is still a concern and under review by EPA. Therefore, in the interim, screening (i.e., decision) criteria have been established at two times the acute criteria (see Table 4 of this fact sheet). These criteria are applied solely to identify those pollutants that should be given special emphasis during development of the SWPPP. Due to the continued use of CCA and CA-C at this facility and the history of pentachlorophenol contamination at this site, monitoring end-points and monitoring are present in this permit for arsenic, chromium, copper, and pentachlorophenol.

Should storm water data exceed the established monitoring end points, the permittee shall reexamine the effectiveness of the SWPPP and any best management practices (BMPs) in use.

f) Effluent Limitations, Outfall 001 and Outfall 002 – Federal Effluent Guidelines.

40 CFR Part 429 establishes Federal Effluent Limitation Guidelines for the Timber Products Processing Point Source Category. This part applies to any timber products processing operation, and any plant producing insulation board with wood as the major raw material that discharges or may discharge process wastewater pollutants to the waters of the United States or that introduces or may introduce process wastewater pollutants in to a publicly owned treatment works. The term "process wastewater" specifically excludes material storage yard runoff (either raw material or processed wood storage).

Effluent limitations representing the degree of effluent reduction attainable by the application of best practicable control technology (BPT) currently available and best available technology economically achievable (BAT) require no discharge of process wastewater pollutants.

Based on a review of the sixteen subcategories listed within Part 429, none are applicable to the current operations at Madison Wood Preservers. However, the special condition stipulating no discharge of process wastewater pollutants shall be carried forward with this reissuance.

g) Effluent Limitations and Monitoring Summary.

Limits are established for pH. Monitoring for pentachlorophenol, hardness, COD, total arsenic, total chromium, and total copper, are required.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

**18. Groundwater:**

The facility currently monitors three wells. 9VAC25-280-10 et seq. became effective February 12, 2004. This regulation establishes statewide groundwater standards (9VAC25-280-40), groundwater standards applicable by physiographic province (9VAC25-280-50), and groundwater criteria applicable by physiographic province (9VAC25-280-70). Table 5 below outlines groundwater standards applicable to Madison Wood Preservers. Although pentachlorophenol only comprises part of the total phenol matrix, phenol is used to evaluate pentachlorophenol results. As such, this would be a conservative value. The groundwater standard for pH is based on the facility being within the Piedmont and Blue Ridge physiographic province. All other standards are applicable statewide. Monitoring for total organic carbon (TOC), total dissolved solids (TDS), and hardness is being removed and monitoring for conductivity is being added.

TABLE 5 – Groundwater Standards	
Parameter	Standard
Arsenic	0.05 mg/L
Chromium	0.05 mg/L
Copper	1.0 mg/L
Phenol	0.001 mg/L
pH	5.5 – 8.5 S.U.

A review of the groundwater monitoring data for the period of 2008 through 2013 shows that the groundwater standards were not exceeded for the constituents of concern: arsenic, chromium, and copper. Also, pentachlorophenol was not detected in groundwater during this period. Additionally, there is no observed pattern of groundwater contamination being more pronounced in one area of the facility. The groundwater shall be monitored for the parameters shown in Table 5 above in accordance with the approved groundwater monitoring plan. A summary of the groundwater monitoring data can be found in the DEQ file for this facility.

**19. Antibacksliding:**

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

**20.a Effluent Limitations/Monitoring Requirements: Outfall 001**

Average flow: Variable (Storm Water Dependent)

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/D - M	Estimate
pH (S.U.)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/D - M	Grab
Pentachlorophenol ( $\mu\text{g/L}$ )	2,3	NA	NA	NA	NL	1/D - M <sup>1</sup>	Grab
Hardness, Total (mg/L as $\text{CaCO}_3$ )	2	NA	NA	NA	NL	1/D - 3M <sup>2</sup>	Grab
Chemical Oxygen Demand (mg/L)	2	NA	NA	NA	NL	1/D - 3M <sup>2</sup>	Grab
Arsenic, Dissolved ( $\mu\text{g/L}$ )	2,3	NA	NA	NA	NL	1/D - 3M <sup>2</sup>	Grab
Chromium, Dissolved ( $\mu\text{g/L}$ )	2,3	NA	NA	NA	NL	1/D - 3M <sup>2</sup>	Grab
Copper, Dissolved ( $\mu\text{g/L}$ )	2,3	NA	NA	NA	NL	1/D - 3M <sup>2</sup>	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements *MGD* = Million gallons per day.
2. Best Professional Judgment *NA* = Not applicable.
3. Water Quality Standards *NL* = No limit; monitor and report.  
*S.U.* = Standard units.

*1/D - M* = Once every month in which a discharge occurs.*1/D - 3M* = Once every three months in which a discharge occurs.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

1. When this facility has received a Certificate of Satisfactory Completion of Remediation from the DEQ Voluntary Remediation Program (VRP), and review of DMR data indicates the facility is below the monitoring end points established with this reissuance for pentachlorophenol, the monitoring frequency for pentachlorophenol shall be reduced to once per discharge per year (1D/Y).
2. The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period.

**20.b Effluent Limitations/Monitoring Requirements: Outfall 002**

Average flow: Variable (Storm Water Dependent)

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/D - 6M <sup>1</sup>	Estimate
pH (S.U.)	3	NA	NA	6.0 S.U.	9.0 S.U.	1/D - 6M <sup>1</sup>	Grab
Pentachlorophenol (µg /L)	2,3	NA	NA	NA	NL	1/D - 6M <sup>1,2</sup>	Grab
Hardness, Total (mg/L as CaCO <sub>3</sub> )	2	NA	NA	NA	NL	1/D - 6M <sup>1</sup>	Grab
Chemical Oxygen Demand (mg/L)	2	NA	NA	NA	NL	1/D - 6M <sup>1</sup>	Grab
Arsenic, Dissolved (µg /L)	2,3	NA	NA	NA	NL	1/D - 6M <sup>1</sup>	Grab
Chromium, Dissolved (µg /L)	2,3	NA	NA	NA	NL	1/D - 6M <sup>1</sup>	Grab
Copper, Dissolved (µg /L)	2,3	NA	NA	NA	NL	1/D - 6M <sup>1</sup>	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements *MGD* = Million gallons per day.
2. Best Professional Judgment *NA* = Not applicable.
3. Water Quality Standards *NL* = No limit; monitor and report.  
*S.U.* = Standard units.

*1/D - 6 M* = Once every six months in which a discharge occurs.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

1. The semiannual monitoring periods shall be January through June and July through December. The DMR shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period.
2. When this facility has received a Certificate of Satisfactory Completion of Remediation from VRP staff, and review of DMR data indicates the facility is below the monitoring end points established with this reissuance for pentachlorophenol, the monitoring frequency for pentachlorophenol shall be reduced to once per discharge per year (1D/Y).

**20.c Effluent Limitations/Monitoring Requirements: Groundwater Monitoring**

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date, groundwater shall be limited and monitored by the permittee as specified below.

PARAMETER	GROUNDWATER MONITORING		MONITORING REQUIREMENTS	
	<u>Limitations</u>	<u>Units</u>	<u>Frequency</u>	<u>Sample Type</u>
Static Water Level (Mean Sea Level)	NL	Feet	*	Measurement
pH	NL	S.U.	*	Grab
Conductivity	NL	µmhos/cm	*	Grab
Pentachlorophenol	NL	µg/L	*	Grab
Arsenic, Total	NL	µg/L	*	Grab
Chromium, Total	NL	µg/L	*	Grab
Copper, Total	NL	µg/L	*	Grab

NL = No limit, monitor and report.

S.U. = Standard Units.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

µmhos/cm = Micromhos per Centimeter.

\*Per the approved Groundwater Monitoring Plan.

1. The semi-annual monitoring periods shall be January 1 – June 30 and July 1 – December 31. The monitoring data shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (July 10 and January 10, respectively).
2. The annual monitoring period shall be January 1 – December 31. The monitoring data shall be submitted no later than the 10<sup>th</sup> day of the month following the monitoring period (January 10, respectively).

**20. Other Permit Requirements:**

- a) Part I.B. of the permit contains quantification levels and compliance reporting instructions. 9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.
- b) Permit Section Part I.C. details the requirements of a Storm Water Management Plan. Industrial storm water discharges may contain pollutants in quantities that could adversely affect water quality. Storm water discharges that are discharged through a conveyance or outfall are considered point sources and require coverage by a VPDES permit. The primary method to reduce or eliminate pollutants in storm water discharges from an industrial facility is through the use of best management practices (BMPs). Storm Water Management Plan requirements are derived from the VPDES General Permit for Storm Water Discharges Associated with Industrial Activity, 9VAC25-151 et seq.

Due to the industrial activities that occur at this site, staff believes that it appropriate for the facility to continue to maintain a SWPPP. The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to surface waters or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants.

**21. Other Special Conditions:**

- a) O&M Manual Requirement. Required by the Code of Virginia §62.1-44.19 and the VPDES Permit Regulation at 9VAC25-31-190.E. The permittee shall maintain a current Operations and Maintenance (O&M) Manual. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M Manual available to Department personnel for review upon request. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- b) Notification Levels  
The permittee shall notify the Department as soon as they know or have reason to believe:
- 1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - a. One hundred micrograms per liter;
    - b. Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
    - c. Five times the maximum concentration value reported for that pollutant in the permit application; or
    - d. The level established by the Board.
  - 2). That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
    - a. Five hundred micrograms per liter;
    - b. One milligram per liter for antimony;
    - c. Ten times the maximum concentration value reported for that pollutant in the permit application; or
    - d. The level established by the Board.

- c) Materials Handling/Storage. 9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. The Code of Virginia at §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.
- d) Process Wastewater Pollutants. There shall be no discharge of process wastewater pollutants. The term "process wastewater" specifically excludes material storage yard runoff (either raw material or processed wood storage).
- e) Retention Time of Treated Lumber. Treated lumber shall remain on drip pads until all drippage has ceased.
- f) Facility Closure Plan. A facility closure plan shall be developed and incorporated in to the O&M Manual. The plan shall address the entire facility closure except those RCRA regulated units with the following specifics:
  - 1) Temporary shutdown condition -- How process water or wastewater will be handled during this period (short term duration of less than one year); and
  - 2) Final shutdown -- Closure of operation areas including (but not limited to) disposal of contaminated soils and groundwater, all wastewater, and process chemicals.The permittee shall be responsible for coordinating with the DEQ Waste Division any closure actions that are regulated under the Virginia Hazardous Waste Management Regulations.
- g) Groundwater Monitoring Plan. The permittee shall continue sampling and reporting groundwater monitoring in accordance with Part I.A. of the permit and the approved groundwater monitoring plan. The purpose of this plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Groundwater Standards. The permittee shall review the existing Groundwater Monitoring Plan and notify the Department of Environmental Quality, Northern Regional Office (DEQ-NRO) in writing whether it is still accurate and complete within 90 days of the permit reissuance date. If the Groundwater Monitoring Plan is no longer accurate and complete, a revised Groundwater Monitoring Plan shall be submitted for approval to DEQ-NRO within 180 days of the permit reissuance date. The approved plan is an enforceable part of the permit. Any future changes to the plan must be submitted for approval to DEQ-NRO within 90 days of said changes.
- h) Site Characterization Report. Should groundwater data warrant such, DEQ may require submittal of a site characterization report no later than 90 days after being notified by DEQ. The approved site characterization report is an enforceable part of the permit.
- i) Corrective Action Plan Requirement. Following review and approval of a site characterization report, the permittee shall submit a corrective action plan to DEQ within 180 days of being notified of this requirement by DEQ. The approved corrective action plan is an enforceable part of the permit.
- j) Chemical Treatment. The permittee shall notify DEQ-NRO 90 days prior to use of any new wood treatment chemicals. Upon notification DEQ-NRO will determine if this activity warrants a modification of the permit.



- k) **Storm Water Monitoring.** Storm water monitoring end points have been established with this permit reissuance for all parameters requiring a wasteload allocation analysis. The permittee shall conduct all storm water monitoring in accordance with Part I.A of the permit.

Parameter	Monitoring End Point (ug/L)
Arsenic	680
Chromium VI*	32
Copper	12.4
Pentachlorophenol	8.6

\*Dissolved chromium shall be used to evaluate the Chromium VI endpoint.

Although this permit reissuance requires that chromium be reported as dissolved chromium, the monitoring end point for Chromium VI is used since this form of chromium is more toxic. Chromium VI has a considerably lower acute criteria value and the transformation between Chromium VI and Chromium III occurs readily in the water and the human body.

During the previous permit cycle, there have been instances of the exceedence of the monitoring end points for copper and Chromium VI. Therefore, per Part I.C.2.b. 3) e) ii of this permit, the effectiveness of the SWPP and BMPs in use shall be reexamined within 30 days of the date of this permit reissuance and modified as necessary to address any deficiencies that caused the exceedences. The revised SWPPP with noted changes shall be submitted to DEQ with monitoring results for review.

Should future storm water monitoring results for a parameter exceed the given end point, the permittee shall reexamine the effectiveness of the SWPPP and BMPs in use per Part I.C.2.b 3) e) ii of this permit to address any deficiencies that caused the exceedences. Resampling for a parameter that exceeded a monitoring end point shall occur within 30 days of any SWPPP or BMP modification. Storm water monitoring data submitted by the permittee above an established monitoring end point does not constitute a violation of the permit.

- l) **TMDL Reopener:** This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

## 22. Permit Section Part II:

Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

## 23. Changes to the Permit from the Previously Issued Permit:

- a) **Special Conditions:**
- 1) The Water Quality Criteria Reopener Special Condition has been removed.
  - 2) A Storm Water Monitoring Special Condition has been added.
  - 3) A Site Characterization Special Condition has been added.
  - 4) A Corrective Action Plan Special Condition has been added.
- b) **Monitoring and Effluent Limitations:**
- 1) The monitoring requirement for ethanolamine in storm water and groundwater has been removed since the 2010 pesticide label for CA-C does not list ethanolamine as an active ingredient.
  - 2) Monitoring for TOC, TDS, and hardness in groundwater has been removed; monitoring for conductivity has been added.
  - 3) The acute criteria and hence, the monitoring end-point for copper has been revised.
  - 4) The monitoring end-point for chromium III has been removed.
  - 5) Monitoring for total metals in storm water and groundwater shall be conducted.

## c) Other

- 1) The Outfall 001 receiving stream is designated as an unnamed tributary of Little Dark Run, not Little Dark Run.
- 2) A VELAP Certification requirement has been added in Part II of the permit.

**24. Variances/Alternate Limits or Conditions: None****25. Public Notice Information:**

First Public Notice Date: 11/07/2013

Second Public Notice Date: 11/14/2013

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3837 or [anna.westernik@deq.virginia.gov](mailto:anna.westernik@deq.virginia.gov). See **Attachment 11** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

**26. Additional Information: Pentachlorophenol History**

The production of pentachlorophenol for wood preserving began on an experimental basis in the 1930s. Since 1984, the purchase and use of pentachlorophenol has been restricted to certified applicators. It is no longer available to the general public but is still used industrially as a wood preservative for utility poles, railroad ties, and wharf pilings. There are two general methods for preserving wood with pentachlorophenol. The pressure process method involves placing wood in a pressure-treating vessel where it is immersed in pentachlorophenol and then subjected to applied pressure. In the non-pressure process method, pentachlorophenol is applied by spraying, brushing, dipping, and soaking.

Madison Wood Preservers constructed two sumps or impoundments as part of the pentachlorophenol process with the original plant in 1959; these sumps were in continuous use until they were closed in 1976 and later filled in, covered with gravel, and capped with asphalt.

Madison Wood Preservers has discontinued use of treatment products containing pentachlorophenol and is now addressing historic use of this product through the VRP. Madison Wood Preservers was granted eligibility in to VRP (00391) on August 2, 2004. In 2005, the former sumps, the backfill material, and surrounding contaminated soils were excavated and disposed in accordance with state and federal regulations. An area approximately 110' x 85' x 8' to 10' deep and totaling 3,500 tons of soil and 17 containers of debris were taken from the site. A summary report was submitted to VRP staff on November 29, 2005.

In correspondence to the facility dated February 22, 2006, VRP staff provided comments and indicated areas of work necessary to complete the site characterization and complete the Program (a copy of this correspondence is located within the permit reissuance file). To date, the facility has not provided a response to this correspondence. While VRP staff acknowledges the significant undertaking of the facility to remove the former sumps, the facility cannot complete the program until the concerns outlined in the February 22, 2006 correspondence are addressed.

The facility, via the permit reapplication package submitted to DEQ-NRO on April 5, 2013, has requested removal of pentachlorophenol monitoring at Outfalls 001 and 002. Although a review of DMR data from 2008 through 2013 indicates that pentachlorophenol monitoring results are below the indicated quantification limit, the monitoring frequency for pentachlorophenol will remain once per discharge per month (1D/M) for Outfall 001, and once per discharge per six months (1D/6M) for Outfall 002 until this facility has received a Certificate of Satisfactory Completion of Remediation from VRP staff, and review of DMR data indicates the facility storm water discharge is below the monitoring end points established with this reissuance. If the aforementioned conditions are satisfied within this permit cycle, the monitoring frequency for pentachlorophenol at both Outfalls 001 and 002 shall be reduced to once per discharge per year (1D/Y). Pentachlorophenol will continue to be a required parameter for groundwater monitoring at all three wells at the frequency established in the approved groundwater monitoring plan.

**27. Additional Comments:**

Previous Board Action(s): None

Staff Comments: This permit was drafted on September 13, 2013; the public comment period ended on December 9, 2013. Several days before the end of the comment period, DEQ-NRO staff began receiving verbal and written comments expressing concern regarding the reissuance of the permit. In particular, a group entitled, Students of the Integrated Peace Performance Project (SIPPP), expressed interest in the draft permit and requested a public meeting to discuss the permit and other water quality related issues in Madison County. DEQ-NRO postponed the permit reissuance until a meeting was held to discuss the aforementioned issues.

DEQ participated in a public education forum on water quality issues at the Madison County Board of Supervisors Auditorium on Thursday, January 24, 2014. The meeting was hosted by the SIPPP. Brief presentations were given by the Madison County Administrator, and representatives from DEQ, the Culpeper Soil and Water Conservation District, the Center for Natural Capital, and the Rivanna Conservation Society. Following the presentations, the panel representatives answered questions during the informal information forum. Approximately 40 people attended the forum including three members of the Madison County Board of Supervisors and members of SIPPP. The forum allowed for an open discussion about water quality issues concerning Madison County. SIPPP initially organized this forum and requested DEQ's participation in order to educate citizens concerned about the proposed reissuance of the VPDES permit for Madison Wood Preservers. However, the focus of the discussion was geared more broadly towards water quality issues in Madison County with little direct discussion of the VPDES program, or the draft permit for Madison Wood Preservers.

Public Comment: Written comments regarding the draft permit were received from five citizens of Madison County, including Kaaren Ray of SIPP who hosted the January 23, 2014 informational meeting. Copies of the e-mails providing comment can be found in the 2014 permit reissuance file.

**ATTACHMENTS**

Attachment 1	MSDS for CCA and Pesticide Label for CA-C
Attachment 2	Facility Schematic/Diagram
Attachment 3	NPDES Permit Rating Worksheet
Attachment 4	Rochelle (DEQ #186D) and Madison (DEQ#186A) Topographic Maps
Attachment 5	Site Visit Memorandum Dated September 12, 2013
Attachment 6	Planning Statement
Attachment 7	Water Quality Criteria and Wasteload Allocation Analysis
Attachment 8	October 2008 – July 2013 pH Data
Attachment 9	Limits calculations for arsenic, chromium and copper
Attachment 10	A Summary of Outfalls 001 and 002 Effluent Data
Attachment 11	Public Notice



Agricultural - CCA

Arch Wood Protection, Inc.

## MATERIAL SAFETY DATA

FOR ANY EMERGENCY, CALL 24 HOURS/7 DAYS:	1-800-654-6911
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300
MSDS QUESTIONS & REQUESTS, CALL MSDS CONSULTATION LINE:	1-800-511-MSDS
FOR CANADIAN TRANSPORTATION ACCIDENTS, CALL CANUTEC:	1-613-996-6666

**PRODUCT NAME:**            **WOLMANAC® CONCENTRATE 50%**  
                                      **WOLMANAC® CONCENTRATE 60%**

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Revision Date: 05/31/2006

Manufacturer: Arch Wood Protection, Inc., 1955 Lake Park Drive, Smyrna, GA 30080

General Use: Restricted-use pesticide for wood preservation  
EPA Reg # 62190-2, 62190-14, PCP Reg # 21226

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	PERCENT	CAS #	EXPOSURE LIMITS (mg/m <sup>3</sup> )		
			OSHA-PEL	ACGIH-TLV	ACGIH-STEL
Chromic Acid	23.75 - 28.5	7738-94-5	(as Cr) 0.1 (Ceiling)	0.05	None
Arsenic Acid	56.00 - 60.0	7778-39-4	(as As) 0.01	0.01	None
Copper Oxide	9.00 - 11.1	1317-38-0	(as Cu) 1.0 (dusts/mists)	1.0 (dusts/mists)	None

### 3. HAZARDS IDENTIFICATION

**Inhalation:** Corrosive to the upper airways when inhaled in concentrations exceeding recommended exposure limits. Short-term overexposure may cause muscle spasms, dizziness and collapse. Prolonged overexposure may cause perforation of nasal septum, hoarseness of the voice, liver injury and red patches on the skin. Chronic arsenic exposure may cause nervous system damage.

**Eye Contact:** Corrosive to the eyes.

**Skin Contact:** Severe irritation to the skin.

**Ingestion:** Corrosive. Can cause internal hemorrhage and death if consumed as a liquid.

Toxic by ingestion; Moderately toxic by dermal contact.

### 4. FIRST AID MEASURES

**Inhalation:** Remove from exposure. If severe breathing difficulty should arise immediately seek medical aid. If breathing has stopped, administer artificial respiration or oxygen.

**Eye Contact:** Exposed eyes should be flushed with large amounts of saline or water for at least 15 minutes, (greater than 1 liter per eye, minimum) using low pressure, taking care that the eyes remain open during this entire procedure. If wearing contact lenses, immediately flush eyes with water for a short period prior to removing contacts, then resume flushing procedures as described above. Immediately seek medical aid.

**Skin Contact:** Flush exposed skin with large amounts of water. Then use soap and water to clean area. Remove contaminated clothing. Seek medical aid if severe irritation develops.

**Ingestion:** Following ingestion, if the patient can swallow without difficulty, administer small quantities of water and/or demulcents (such as milk) to dilute the chromic acid. Do not administer anything by mouth if difficulty with swallowing exists. DO NOT induce vomiting. Seek medical aid immediately. Do not attempt to give anything to an unconscious person. Call a physician or poison center immediately.

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## 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	NA	<b>Lower Explosive Limit</b>	NA
<b>Auto-ignition</b>	NA	<b>Upper Explosive Limit</b>	NA

**Extinguishing Agents:** Not applicable

**Fire-Fighting Procedures:** Fire from a separate fuel source may be intense enough to cause thermal decomposition releasing toxic fumes and/or gases. Wear complete fire service protective equipment, including full-face NIOSH/NFPA – approved self-contained breathing apparatus.

**Fire and Explosion Hazard:** This product will not burn. Closed containers may explode (due to the build up of steam pressure) when exposed to extreme heat. Water could evaporate to expose a combustible residue. Under fire conditions the product may emit irritants, toxic gas and/or fumes. May cause fire on contact with combustible materials (e.g. oil-stained rags or sawdust).

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## 6. ACCIDENTAL RELEASE MEASURES

**Spill or Leak Procedures:** (Product): Stop leak if no risk involved. Contain spill by using an inert non-biodegradable absorbent material (e.g., kitty litter or synthetic absorbents). Shovel into an appropriate container and dispose of waste in accordance with federal, state and local regulations. If material can be recovered, use a vacuum system designed for liquid recovery. If a reportable quantity (RQ) is released into the environment, report to the National Response Center (1-800-424-8802), the State Emergency Planning Commission (SERC), the Local Emergency Planning Committee (LEPC) and/or your local fire department depending on availability.

**Reportable Quantities:** If <1/2 gallon (7.5 lbs.) as CCA 60% or <2/3 gallon (9 lbs.) as CCA 50% is released into the environment, the arsenic RQ of one (1) pound will be exceeded.

**Waste Disposal:** Dispose of waste in accordance with Federal and State Hazardous Waste regulations. Place in tightly sealed, labeled containers. This product is an EPA characteristic waste as D004 and D007 in 40 CFR 261.

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## 7. HANDLING AND STORAGE

**Storage Conditions:** Well ventilated area. Maintain good housekeeping. Keep properly labeled containers closed when not in use. Protect from physical damage.

**Caution:** Do not wear contaminated clothing. Wash hands thoroughly before eating, drinking, using tobacco products, and/or using restrooms.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory Protection:** Wear a NIOSH approved respirator if airborne concentrations exceed the exposure limits. Use a full-face air-purifying respirator equipped with acid-gas cartridges and a P100 pre-filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

**Eye Protection:** Splash-proof chemical goggles and face shield should be worn wherever splash hazards exist.

**Skin/Foot Protection:** PVC, polyethylene or neoprene gloves are recommended. Wear long sleeves, pants and leather or rubber shoes. Coveralls or aprons if needed.

**Ventilation:** Use local exhaust ventilation to maintain levels to below the exposure limits.

**Other Protective Equipment:** Facilities storing or utilizing this material must be equipped with an emergency eyewash and safety shower station within easy access for quick drenching or flushing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Dk. Brown liq.	<b>Solubility in Water</b>	Soluble	<b>Specific Gravity</b>	1.64-1.80
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Odor	Metallic	pH	<2	(Water =1)	
Physical State	Liquid	Vapor Pressure	NA	Boiling Point	107C
				Freezing Point	-30C

## 10. STABILITY AND REACTIVITY

**Conditions contributing to instability:** None.

**Incompatibilities:** Alkaline products, zinc, galvanized metal, aluminum, organic combustible materials (such as oily rags or sawdust)

**Hazardous Reactions/Decomposition/Combustion Products:** Chromium, copper and arsenic fumes

**Hazardous Polymerization:** Does not occur

## 11. TOXICOLOGICAL INFORMATION

**Oral Toxicity:** LD50= 188-192 mg/kg (rat – CCA Concentrate 65%)

**Dermal Toxicity:** LD50= 519.9 mg/kg (rabbit – CCA Concentrate 65%)

Cancers in humans have followed from long term consumption of Fowler's Solution, a medicinal trivalent arsenical; inhalation and skin contact with inorganic trivalent arsenical sheep-dust; the combined inhalation of arsenic trioxide (trivalent arsenical), sulfur dioxide, and other particulates from ore smelting in arsenic trioxide production; and occupational exposure to nonwater-soluble hexavalent chromium.

## 12. ECOLOGICAL INFORMATION

Acute 96-hour LC50= 90.3 ppm  
(Bluegill Sunfish – CCA Concentrate 40%)

8-day dietary LD50= >4640 ppm  
(Mallard Ducks – CCA Concentrate 40%)

Acute 96-hour LC50= 0.84 ppm  
(Rainbow Trout – CCA Concentrate 40%)

8-day dietary LD50= 920 ppm  
(Bobwhite Quail – CCA Concentrate 40%)

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**NOTE:** Arsenic, Chrome and Copper occur naturally in soil.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Guidance:** Dispose of waste in accordance with Federal and State Hazardous Waste regulations. Place in tightly sealed, labeled containers. This product is an EPA characteristic waste as D004 and D007 in 40 CFR 261.

## 14. TRANSPORT INFORMATION

**DOT Haz. Mat. Classification:** Arsenical Pesticide, Liquid, Toxic, (Arsenic Acid, Chromic Acid), 6.1, UN 2994, III

**North American Emergency Response Guide # 151**

## 15. REGULATORY INFORMATION

**Canada:** Regulated under WHMIS.

**CERCLA/SARA (40 CFR 302.4):** Regulated under CERCLA/SARA. Chromic acid and arsenic acid have reportable quantities of 10 pounds and 1 pound respectively under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). If <1/2 gallon (7.5 lbs.) as CCA 60% or <2/3 gallon (9 lbs.) as CCA 50% is released into the environment, the arsenic RQ of one (1) pound will be exceeded.

**SARA 311/312 (40 CFR 370):** This product is an OSHA hazardous material under 29 CFR 1910.1200, therefore, it is regulated under the Superfund Amendments and Reauthorization Act (SARA) Sections 311 and 312. A facility must report chemical storage quantities that equal or exceed 10,000 pounds anytime during the reporting year to the appropriate state and local agencies.

**SARA 313 (40 CFR 372):** This product requires a Toxic Release Inventory reporting for individual material uses of 25,000 pounds or more. Reporting is under Copper Compounds, Chromium Compounds and Arsenic Compounds.

**RCRA (40 CFR 261):** Dispose of waste in accordance with Federal and State Hazardous Waste regulations. Place in tightly sealed, labeled containers. This product is an EPA characteristic waste as D004 and D007 in 40 CFR 261.

**OSHA (29 CFR 1910.1200):** This product is regulated under the Hazard Communication Standard

**FIFRA (40 CFR 152-186):** This product is subject to regulation under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from the Toxic Substances Control Act (TSCA) Inventory listing requirements. This product is registered as a restricted-use pesticide. Users must be certified (or licensed) applicators or operate under the direct supervision of a certified applicator.

**California Proposition 65:** This product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. (This statement issued in accordance with California Proposition 65).

**NFPA:** 3-Health, 0-Flammability, 0-Reactivity

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## 16. OTHER INFORMATION

Sections Revised: 14

### ABBREVIATIONS

<b>OSHA</b>	Occupational Safety and Health Administration	<b>TLV</b>	Threshold Limit Value
<b>NFPA</b>	National Fire Protection Association	<b>STEL</b>	Short-Term Exposure Limit
<b>FIFRA</b>	Federal Insecticide, Fungicide and Rodenticide Act	<b>RCRA</b>	Resource Conservation and Recovery Act
<b>CERCLA</b>	Comprehensive Environmental Response, Compensation, and Liability Act	<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>SARA</b>	Superfund Authorization and Reauthorization Act	<b>NIOSH</b>	National Institute of Occupational Safety and Health
<b>PEL</b>	Permissible Exposure Limit	<b>TSCA</b>	Toxic Substances Control Act
<b>DOT</b>	Department of Transportation	<b>IARC</b>	International Agency for Research on Cancer
<b>NTP</b>	National Toxicology Program	<b>IBC</b>	International Building Code
<b>CFR</b>	Code of Federal Regulations	<b>mg/m3</b>	Milligrams per cubic meter
<b>CWA</b>	Clean Water Act	<b>CAA</b>	Clean Air Act
<b>CAS</b>	Chemical Abstracts Service		

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH WOOD PROTECTION, INC BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH WOOD PROTECTION, INC. MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

APR 19 2012

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

John R. French, Senior Regulatory Manager  
Arch Treatment Technologies, Inc.  
5660 New Northside Drive, Suite 1100  
Atlanta, GA. 30328

Subject: Wolman E (CA-C)  
EPA Registration Number 75506-10  
Application Date: January 18, 2012

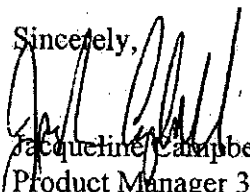
Dear Mr. French:

The Agency has reviewed your submission in accordance with continuing registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended, and determined the action to be acceptable with the following comment:

- Change "For Industrial Use Only" to "For Industrial Use" under the brand name.

In summary, your request to amend the label by adding a surface application for utility poles and other treated wood products has been reviewed and will replace your previously accepted label. A stamped copy of the accepted with comments labeling is enclosed. Submit one copy of your final printed labeling before distributing or selling the product bearing the revised labeling. If you have any questions, please contact Tom Luminello by telephone, (703) 308-8075, or by e-mail at [luminello.tom@epa.gov](mailto:luminello.tom@epa.gov).

Sincerely,

  
Jacqueline Campbell,  
Product Manager 34  
Regulatory Management Branch II  
Antimicrobials Division (7510 P)

delete

Copper ethanolamine complex (CAS# 14215-52-2)* .....	26.73%
Tebuconazole: .....	0.19%
Propiconazole: .....	0.19%
<b>OTHER INGREDIENTS: .....</b>	<b>72.89%</b>
<b>Total .....</b>	<b>100.00%</b>

**DANGER**

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage. If breathing has stopped or is difficult, administer artificial respiration or oxygen as indicated.

... enclido,  
 ... as  
 ...  
 ...  
 ... 75506-10

3/4

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product is to be used for treatment of wood products. Do not attempt to use without having the necessary safety equipment.

[Pressure treatment of wood products shall utilize water solutions having concentrations ranging from 0.1 percent to 5.0 percent (on a copper plus other active ingredient basis) by weight. Pressure impregnation procedures must comply with the current specifications of Arch Treatment Technologies, Inc., or the American Wood Protection Association. Such processes used to apply Copper Azole formulations shall leave no visible surface deposits (meaning a surface residue or crystallization) on the treated wood. Small isolated or infrequent spots of chemical on otherwise clean wood shall be allowed.]

[This product may also be used as a surface applied treatment for utility poles and other treated wood products. For such applications it may be thickened and used at concentrations of up to 9.62 percent (on a copper plus other active ingredient basis) by weight.]

Treatment of wood products with this Copper Azole wood preservative provides wood with protection against termites, white rot, brown rot, soft rot, and dry rot.

## **STORAGE AND DISPOSAL**

### **STORAGE:**

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

### **PESTICIDE DISPOSAL:**

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### **CONTAINER DISPOSAL:**

{Containers 5 gallons or more}

Nonrefillable Container. Do not refill or reuse container. Triple rinse as follows: Fill container 1/4 full with water. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into the application equipment or mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill.

{Containers less than 5 gallons}

Nonrefillable Container. Do not refill or reuse container. Triple rinse as follows: Fill container 1/4 full with water. Shake for 10 seconds. Empty the rinsate into the application equipment or mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning. If not available, puncture and dispose in a sanitary landfill.

## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER:** Corrosive. Causes irreversible eye damage or skin burns. May be fatal if absorbed through skin. Harmful if swallowed. Do not get in eyes, on skin or on clothing.

### **Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants,

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10

- Socks and chemical resistant footwear,
- Goggles or face shield,
- Chemical-resistant gloves (Some materials that are chemical-resistant to this product are barrier laminate or Viton),
- A NIOSH-approved respirator with an ammonia, organic, and HEPA cartridge such as P-100 should be worn when PEL threshold levels are exceeded over an 8 hour work period.

#### USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separate from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

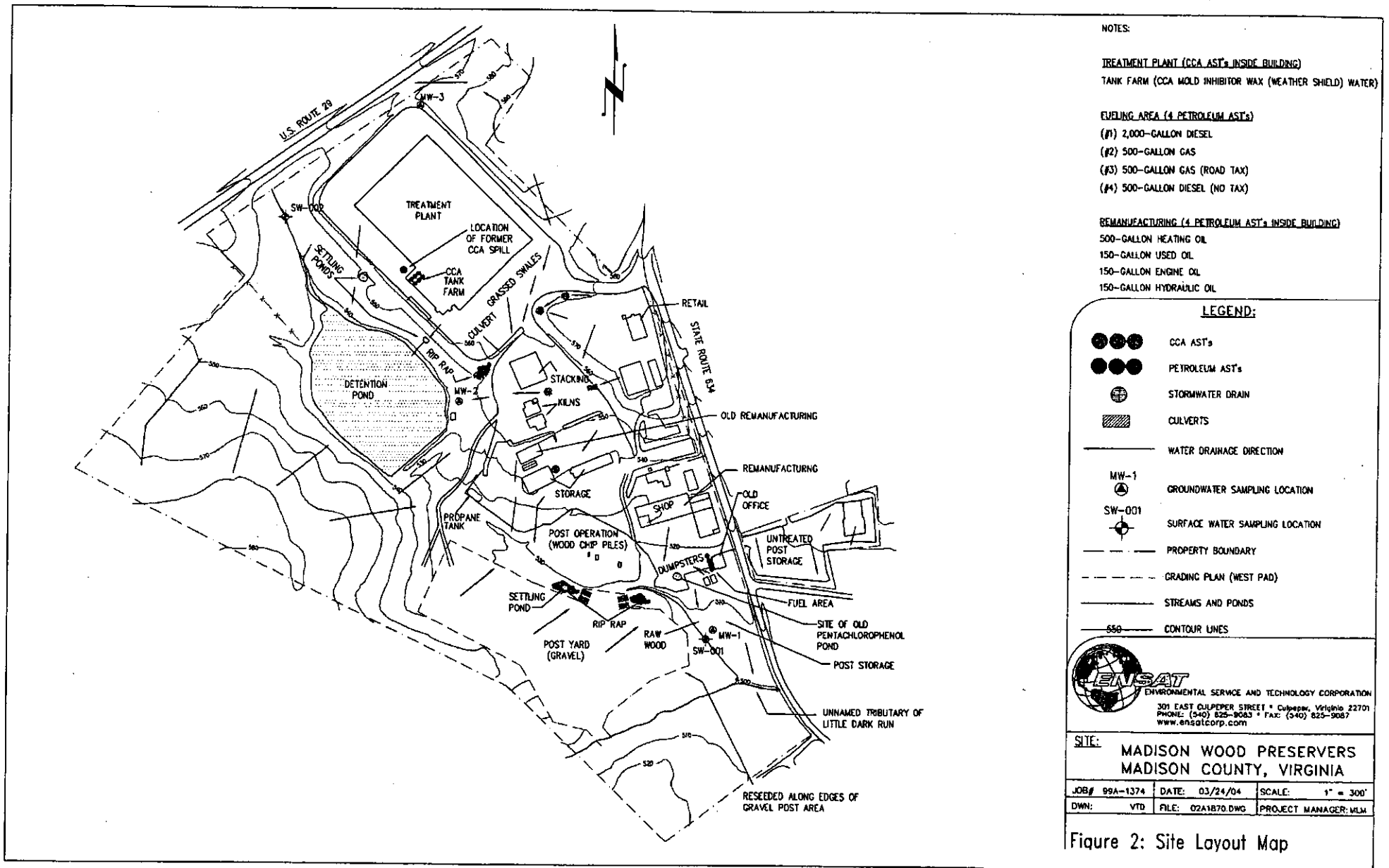
#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

APPROVED  
FOR SALE  
EPA REG. NO. 75506-10

APR 19 2012

75506-10



## NPDES PERMIT RATING WORK SHEET

VA0087696

**FACTOR 3: Conventional Pollutants**

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one)

☐

BOD

☐

COD

☐

Other: \_\_\_\_\_

Permit Limits: (check one)

☐

&lt; 100 lbs/day

☐

100 to 1000 lbs/day

☐

&gt; 1000 to 3000 lbs/day

☐

&gt; 3000 lbs/day

Code

Points

1

0

2

5

3

15

4

20

Code Number Checked: NAPoints Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

☐

&lt; 100 lbs/day

☐

100 to 1000 lbs/day

☐

&gt; 1000 to 5000 lbs/day

☐

&gt; 5000 lbs/day

Code

Points

1

0

2

5

3

15

4

20

Code Number Checked: NAPoints Scored: 0

C. Nitrogen Pollutants: (check one)

☐

Ammonia

☐

Other: \_\_\_\_\_

Permit Limits: (check one)

Nitrogen Equivalent

☐

&lt; 300 lbs/day

☐

300 to 1000 lbs/day

☐

&gt; 1000 to 3000 lbs/day

☐

&gt; 3000 lbs/day

Code

Points

1

0

2

5

3

15

4

20

Code Number Checked: NAPoints Scored: 0Total Points Factor 3: 0**FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☐ YES; (If yes, check toxicity potential number below)☒ NO; (If no, go to Factor 5)

Determine the Human Health potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the Human Health toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: NATotal Points Factor 4: 0

## NPDES PERMIT RATING WORK SHEET

## FACTOR 5: Water Quality Factors

- A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

- B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
<input type="checkbox"/> YES	1	0
<input checked="" type="checkbox"/> NO	2	5

- C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
<input checked="" type="checkbox"/> YES	1	10
<input type="checkbox"/> NO	2	0

Code Number Checked: A 2 B 2 C 1  
 Points Factor 5: A 0 + B 5 + C 10 = 15

## FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) \_\_\_\_\_

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input type="checkbox"/> 3	3	30
<input checked="" type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

Enter the multiplication factor that corresponds to the flow code: \_\_\_\_\_

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked: 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.6 = 0

- B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

Code	Points
<input type="checkbox"/> 1	10
<input checked="" type="checkbox"/> 2	0

- C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

Code	Points
<input type="checkbox"/> 1	10
<input checked="" type="checkbox"/> 2	0

Code Number Checked: A 4 B 2 C 2  
 Points Factor 6: A 0 + B 0 + C 0 = 0

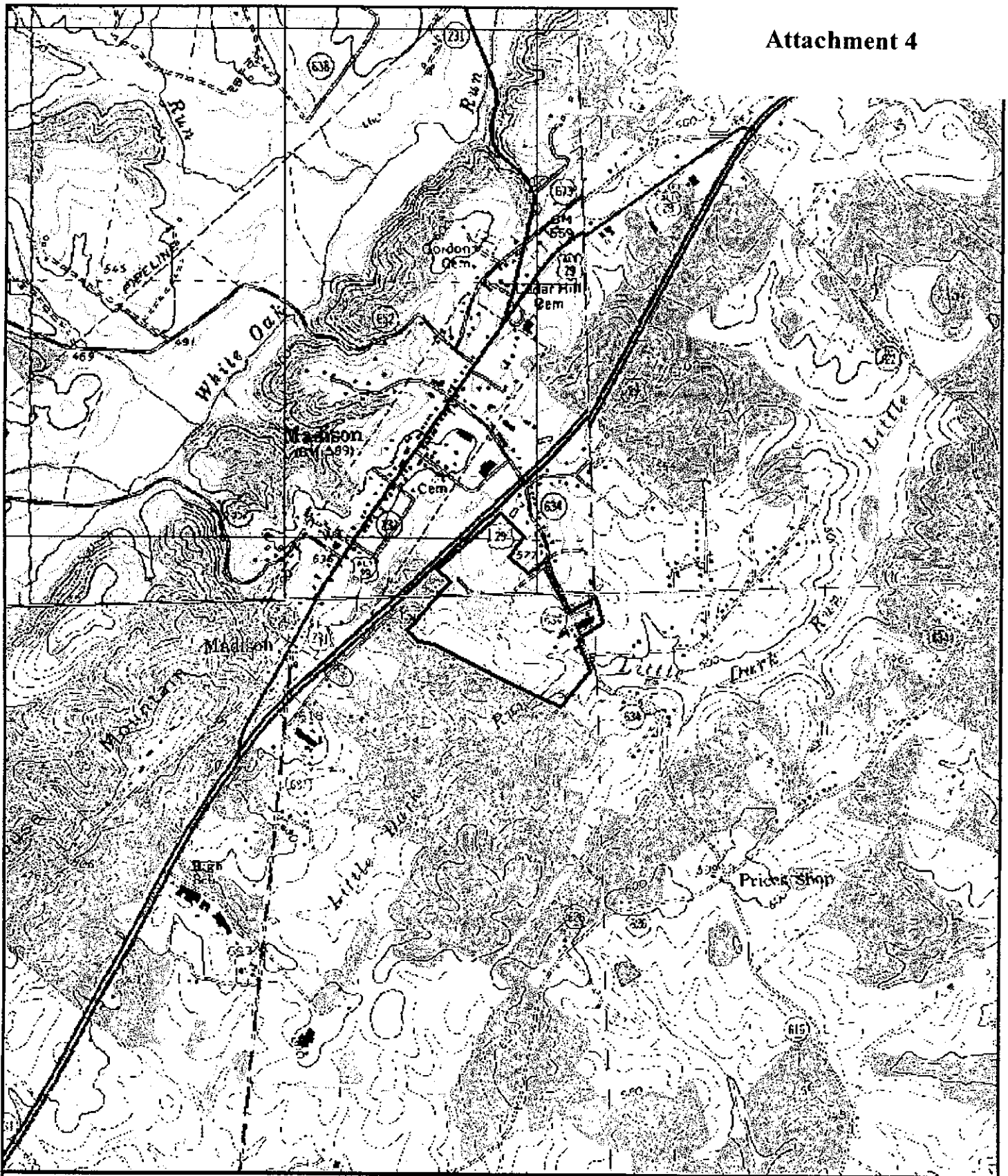



FIGURE 1: SITE LOCATION MAP

Approximate Scale: 1" = 1,875'

LEGEND

 Area under Foreign Ownership







## MEMORANDUM

### Northern Regional Office

**TO:** File

**FROM:** Anna Westernik, Water Permit Writer

**DATE:** September 12, 2013

**SUBJECT:** September 11, 2013 Site Visit to Madison Wood Preservers, Inc. (VA0087696)

---

I conducted a site visit to Madison Wood Preservers on September 11, 2013 with Alan Lacey of ENSAT Corporation to observe facility operations prior to permit reissuance. We met with Randall Lillard of Madison Wood Preservers, Inc. on site. The Madison Wood Preservers plant, located on Oak Park Road in Madison County consists of a untreated and treated wood storage areas, chromated copper arsenate (CCA) treatment for agricultural products and copper azole (commercially known of Wolman E (CA-C)) treatment for residential products, and a chemical storage area.

White lumber is received at the facility by truck. The wood is inspected, sorted, and labeled for processing. Dimensional lumber is treated in one of three cylinders where the CCA or CA-C solutions are introduced into the wood via vacuum. After treatment, the lumber is placed on an elevated drip pad for drying. The drip pad area has secondary containment and an impermeable plastic liner. Any CCA or CA-C product that has dripped from the lumber is captured on the pad, filtered and reused. All processing occurs within a 4.5 acre building. CCA and CA-C products are stored in a tank farm within the main processing area. This area has secondary containment and a synthetic liner underneath it. All chemical loading, mixing, and recycling takes place in this area.

Discharge from the facility is solely storm water runoff from the 33 acre site that drains to one of two outfalls. There is no treatment for storm water runoff. Both outfalls, the storm water pond, and the unnamed tributary of Little Dark Run were observed on this date

Outfall 001 is located on the southeast side of the property. This outfall receives storm water runoff from a pasture on the opposite side of the receiving stream, Little Dark Run, UT, in addition to upstream sources in the area of the facility. Amphibian life was observed in the unnamed tributary of Little Dark Run near this outfall.

Outfall 002 is associated with a storm water retention pond located on the northwest side of the property. The storm water retention pond receives storm water runoff from parking lot areas and Route 29 as well as some roof drainage. Monitoring is conducted at the top of the pond. This outfall discharges to an

September 11, 2013 Site Visit to Madison Wood Preservers (VA0087696)

Page 2

September 12, 2013

unnamed tributary of Little Dark Run through this pond. Fish were observed in the pond on this date. Aquatic life was not observed in the unnamed tributary of Little Dark Run in this area.

I obtained MSDS sheets from Mr. Lillard for CCA and CA-C. Mr. Lacey and I discussed the need to revise the SWPPP and add BMPs due to the occasional exceedence of monitoring endpoints for copper and chromium. Some finished product is stored uncovered on the tarmac. Increased protection of the outfalls and cleaning of the storm water drains may assist in reduction of the monitoring values.

To: Susan Mackert  
From: Jennifer Carlson

Date: April 30, 2013  
Subject: Planning Statement for Madison Wood Preservers  
Permit Number: VA0087696

**Information for Outfall 001 / Outfall 002:**

Discharge Type: Industrial Storm Water (Outfall 001 and Outfall 002)

Discharge Flow: Variable (Outfall 001 and Outfall 002)

Receiving Stream: Little Dark Run (Outfall 001 and Outfall 002)

Latitude / Longitude: 38° 22' 21" / -78° 15' 01" (Outfall 001)

38° 22' 35" / -78° 15' 22" (Outfall 002)

Rivermile: 0.02 (Outfall 001)

0.46 (Outfall 002)

Streamcode: 3-XAI

Waterbody: VAN-E15R

Water Quality Standards: Class III, Section 4

Drainage Area: 0.25mi<sup>2</sup> (Outfall 001)

0.04mi<sup>2</sup> (Outfall 002)

1. Please provide water quality monitoring information for the receiving stream segment. If there is not monitoring information for the receiving stream segment, please provide information on the nearest downstream monitoring station, including how far downstream the monitoring station is from the outfall.

Outfall 001 and Outfall 002 discharge into an unnamed tributary to Little Dark Run. This unnamed tributary has not been monitored or assessed by DEQ. The nearest downstream DEQ monitoring station is 3-LDR003.19, located at the Route 643 bridge. This monitoring station is located approximately 0.04 miles downstream of Outfall 001, and approximately 0.48 miles downstream of Outfall 002. The following is the water quality summary for Little Dark Run, as taken from the Draft 2012 Integrated Report\*:

*DEQ ambient stations 3-LDR000.70, at Route 680, and 3-LDR003.19, at Route 634.*

*E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. A bacteria TMDL for the Little Dark Run watershed was completed and approved. The aquatic life, fish consumption and wildlife uses are considered fully supporting.*

*\*Virginia's Draft 2012 Integrated Report (IR) has been through the public comment period and reviewed by EPA. The 2012 IR is currently awaiting final approval.*

2. Does this facility discharge to a stream segment on the 303(d) list? If yes, please fill out Table A.

No.

3. Are there any downstream 303(d) listed impairments that are relevant to this discharge? If yes, please fill out Table B.

Yes.

**Table B. Information on Downstream 303(d) Impairments and TMDLs**

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA	TMDL Schedule
<b>Impairment Information in the Draft 2012 Integrated Report*</b>							
Little Dark Run	Recreation	<i>E. coli</i>	Outfall 001: 0.02 miles  Outfall 002: 0.46 miles	Robinson River Watershed Bacteria 12/12/2005	None	Not expected to discharge pollutant	---

*\*Virginia's Draft 2012 Integrated Report (IR) has been through the public comment period and reviewed by EPA. The 2012 IR is currently awaiting final approval.*

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

The tidal Rappahannock River is listed with a PCB impairment. In support for the PCB TMDL that is scheduled for development by 2016 for the tidal Rappahannock River, this facility is a candidate for low-level PCB monitoring. Low-level PCB analysis uses EPA Method 1668, which is capable of detecting low-level concentrations for all 209 PCB congeners. Low-level PCB monitoring is not warranted for this facility, as there are not any stream segments immediately downstream of the facility that are listed with a PCB impairment. Fish tissue monitoring has been conducted on Little Dark Run and there have been no exceedances of the fish tissue criterion for PCBs. In addition, this facility is not expected to be a source of, or discharge, PCBs. Based upon this information, this facility will not be requested to monitor for low-level PCBs.

There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

5. Fact Sheet Requirements – Please provide information regarding any drinking water intakes located within a 5 mile radius of the discharge point.

There are no public water supply intakes located within 5 miles of this discharge.

# FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Madison Wood Preservers

Permit No.: VA0087696

Receiving Stream: Little Dark Run, Ut

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO <sub>3</sub> ) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	0 %	Mean Hardness (as CaCO <sub>3</sub> ) =	44 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	0 %	90% Temp (Annual) =	25 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	0 %	90% Temp (Wet season) =	15 deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	0 %	90% Maximum pH =	6.6 SU
10% Maximum pH =	SU	30Q10 (Wet season) =	0 MGD	- 30Q10 Mix =	0 %	10% Maximum pH =	6.4 SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.433 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n						
Early Life Stages Present Y/N? =	y						

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile <sup>C</sup>	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin <sup>C</sup>	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	4.68E+01	3.34E+00	na	--	4.68E+01	3.34E+00	na	--	--	--	--	--	--	--	--	--	4.68E+01	3.34E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	4.68E+01	6.36E+00	na	--	4.68E+01	6.36E+00	na	--	--	--	--	--	--	--	--	--	4.68E+01	6.36E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene <sup>C</sup>	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine <sup>C</sup>	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis(2-Chloroethyl) Ether <sup>C</sup>	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis(2-Chloroisopropyl) Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate <sup>C</sup>	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromofom <sup>C</sup>	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.6E+00	6.0E-01	na	--	1.6E+00	6.0E-01	na	--	--	--	--	--	--	--	--	--	1.6E+00	6.0E-01	na	--
Carbon Tetrachloride <sup>C</sup>	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane <sup>C</sup>	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor <sup>C</sup>	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide <sup>C</sup>	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene <sup>C</sup>	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene <sup>C</sup>	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane Alpha-BHC <sup>C</sup>	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane Beta-BHC <sup>C</sup>	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane Gamma-BHC <sup>C</sup> (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane <sup>C</sup>	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone <sup>C</sup>	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	4.2E+01	4.8E+00	na	--	4.2E+01	4.8E+00	na	--	--	--	--	--	--	--	--	--	4.2E+01	4.8E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride <sup>C</sup>	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	9.1E+01	1.0E+01	na	4.6E+03	9.1E+01	1.0E+01	na	4.6E+03	--	--	--	--	--	--	--	--	9.1E+01	1.0E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine <sup>C</sup>	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine <sup>C</sup>	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine <sup>C</sup>	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total <sup>C</sup>	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol <sup>C</sup>	0	4.8E+00	3.7E+00	na	3.0E+01	4.8E+00	3.7E+00	na	3.0E+01	--	--	--	--	--	--	--	--	4.8E+00	3.7E+00	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

# FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Madison Wood Preservers

Permit No.: VA0087696

Receiving Stream: Little Dark Run, Ut

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO <sub>3</sub> ) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	0 %	Mean Hardness (as CaCO <sub>3</sub> ) =	44 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	0 %	90% Temp (Annual) =	25 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	0 %	90% Temp (Wet season) =	15 deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	0 %	90% Maximum pH =	6.6 SU
10% Maximum pH =	SU	30Q10 (Wet season) =	0 MGD	- 30Q10 Mix =	0 %	10% Maximum pH =	6.4 SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.433 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n						
Early Life Stages Present Y/N? =	y						

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile <sup>C</sup>	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin <sup>C</sup>	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	4.68E+01	3.34E+00	na	--	4.68E+01	3.34E+00	na	--	--	--	--	--	--	--	--	--	4.68E+01	3.34E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	4.68E+01	6.36E+00	na	--	4.68E+01	6.36E+00	na	--	--	--	--	--	--	--	--	--	4.68E+01	6.36E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene <sup>C</sup>	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine <sup>C</sup>	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis(2-Chloroethyl) Ether <sup>C</sup>	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis(2-Chloroisopropyl) Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate <sup>C</sup>	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromofom <sup>C</sup>	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.6E+00	6.0E-01	na	--	1.6E+00	6.0E-01	na	--	--	--	--	--	--	--	--	--	1.6E+00	6.0E-01	na	--
Carbon Tetrachloride <sup>C</sup>	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane <sup>C</sup>	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane <sup>C</sup>	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	2.9E+02	3.8E+01	na	--	2.9E+02	3.8E+01	na	--	--	--	--	--	--	--	--	--	2.9E+02	3.8E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene <sup>C</sup>	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	1.8E-02
Copper	0	6.2E+00	4.4E+00	na	--	6.2E+00	4.4E+00	na	--	--	--	--	--	--	--	--	--	6.2E+00	4.4E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	1.6E+04
DDD <sup>C</sup>	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	3.1E-03
DDE <sup>C</sup>	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	2.2E-03
DDT <sup>C</sup>	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	1.7E-01	1.7E-01	na	--
Dibenz(a,h)anthracene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	9.6E+02
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	1.9E+02
3,3-Dichlorobenzidine <sup>C</sup>	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	2.8E-01
Dichlorobromomethane <sup>C</sup>	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
1,2-Dichloroethane <sup>C</sup>	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	7.1E+03
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	1.0E+04
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane <sup>C</sup>	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
1,3-Dichloropropane <sup>C</sup>	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	2.1E+02
Dieldrin <sup>C</sup>	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	5.4E-04
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	4.4E+04
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	8.5E+02
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	1.1E+06
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	4.5E+03
2,4-Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	2.8E+02
2,4-Dinitrotoluene <sup>C</sup>	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	3.4E+01
Dioxin 2,3,7,8- tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	5.1E-08
1,2-Diphenylhydrazine <sup>C</sup>	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	6.0E-02
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	3.0E-01



Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor <sup>C</sup>	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide <sup>C</sup>	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene <sup>C</sup>	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene <sup>C</sup>	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane																					
Alpha-BHC <sup>C</sup>	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane																					
Beta-BHC <sup>C</sup>	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane																					
Gamma-BHC <sup>C</sup> (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane <sup>C</sup>	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene <sup>C</sup>	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone <sup>C</sup>	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	4.2E+01	4.8E+00	na	--	4.2E+01	4.8E+00	na	--	--	--	--	--	--	--	--	--	4.2E+01	4.8E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride <sup>C</sup>	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	9.1E+01	1.0E+01	na	4.6E+03	9.1E+01	1.0E+01	na	4.6E+03	--	--	--	--	--	--	--	--	9.1E+01	1.0E+01	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine <sup>C</sup>	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine <sup>C</sup>	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine <sup>C</sup>	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total <sup>C</sup>	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol <sup>C</sup>	0	4.8E+00	3.7E+00	na	3.0E+01	4.8E+00	3.7E+00	na	3.0E+01	--	--	--	--	--	--	--	--	4.8E+00	3.7E+00	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	na	4.2E+03
Silver	0	8.4E-01	--	na	--	8.4E-01	--	na	--	--	--	--	--	--	--	--	--	8.4E-01	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane <sup>C</sup>	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	--	--	na	4.0E+01
Tetrachloroethylene <sup>C</sup>	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	--	--	na	4.7E-01
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	--	--	na	6.0E+03
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Toxaphene <sup>C</sup>	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	na	2.8E-03
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	4.6E-01	7.2E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	--	--	na	7.0E+01
1,1,2-Trichloroethane <sup>C</sup>	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	--	--	na	1.6E+02
Trichloroethylene <sup>C</sup>	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	--	--	na	3.0E+02
2,4,6-Trichlorophenol <sup>C</sup>	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride <sup>C</sup>	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
Zinc	0	5.8E+01	5.9E+01	na	2.6E+04	5.8E+01	5.9E+01	na	2.6E+04	--	--	--	--	--	--	--	--	5.8E+01	5.9E+01	na	2.6E+04

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.  
Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic  
= (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	3.6E-01
Chromium III	2.3E+01
Chromium VI	6.4E+00
Copper	2.5E+00
Iron	na
Lead	2.9E+00
Manganese	na
Mercury	4.6E-01
Nickel	6.1E+00
Selenium	3.0E+00
Silver	3.4E-01
Zinc	2.3E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Madison Wood Preservers (VA0087696)  
Outfall 001 pH DMR Data (Oct 2008 -- Jul 2013)

Attachment 8

DMR Due Date	Concentration (S.U.)
10-Aug-13	6.5
10-Jul-13	6.5
10-Jun-13	6.5
10-May-13	6.7
10-Apr-13	6.5
10-Mar-13	6.3
10-Feb-13	6.4
10-Jan-13	6.5
10-Nov-12	6.5
10-Oct-12	6.7
10-Sep-12	6.7
10-Aug-12	6.6
10-Jul-12	6.6
10-Jun-12	6.4
10-May-12	6.6
10-Apr-12	6.5
10-Mar-12	6.4
10-Feb-12	6.5
10-Jan-12	6.6
10-Dec-11	6.6
10-Nov-11	6.5
10-Oct-11	6.5
10-Sep-11	6.6
10-Aug-11	6.5
10-Jul-11	6.4
10-Jun-11	6.6
10-May-11	6.5
10-Apr-11	6.4
10-Mar-11	6.5
10-Feb-11	6.5
10-Jan-11	6.5
10-Dec-10	6.6
10-Nov-10	6.5
10-Oct-10	6.3
10-Sep-10	6.4
10-Aug-10	6.5
10-Jul-10	6.4
10-Jun-10	6.6
10-May-10	6.4
10-Apr-10	6.4
10-Mar-10	6.4
10-Feb-10	6.6
10-Jan-10	6.6

10-Dec-09	6.4
10-Nov-09	6.5
10-Oct-09	6.6
10-Sep-09	6.7
10-Jul-09	6.3
10-Jun-09	6.6
10-May-09	6.4
10-Apr-09	6.5
10-Mar-09	6.5
10-Feb-09	6.4
10-Jan-09	6.5
10-Dec-08	6.6
10-Nov-08	6.5
<b>90th Percentile</b>	<b>6.6</b>
<b>10th Percentile</b>	<b>6.4</b>

9/9/2013 11:02:15 AM

Facility = Madison Wood Preservers -- Outfall 001

Chemical = Arsenic

Chronic averaging period = 4

WLAa = 340

WLAc = 150

Q.L. = .5

# samples/mo. = 1

# samples/wk. = 1

Summary of Statistics:

# observations = 12

Expected Value = 7.57151

Variance = 196.663

C.V. = 1.852164

97th percentile daily values = 35.6961

97th percentile 4 day average = 24.4103

97th percentile 30 day average = 12.3875

# < Q.L. = 0

Model used = lognormal

No Limit is required for this material

The data are:

1.5

1

2.8

37

4.1

2

1.1

8.9

18

1

1.9

11

9/9/2013 11:03:21 AM

Facility = Madison Wood Preservers -- Outfall 002

Chemical = Arsenic

Chronic averaging period = 4

WLAa = 340

WLAc = 150

Q.L. = .5

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 3

Expected Value = 4.36666

Variance = 6.8644

C.V. = 0.6

97th percentile daily values = 10.6259

97th percentile 4 day average = 7.26521

97th percentile 30 day average = 5.26643

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

3.2

4.3

5.6

9/6/2013 5:07:02 PM

Facility = Madison Wood Preservers -- Outfall 001

Chemical = Chromium VI

Chronic averaging period = 4

WLAa = 16

WLAc = 11

Q.L. = 0.5

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 19

Expected Value = 16.4899

Variance = 5376.69

C.V. = 4.446705

97th percentile daily values = 102.377

97th percentile 4 day average = 70.3291

97th percentile 30 day average = 39.9313

# < Q.L. = 5

Model used = delta lognormal

A limit is needed based on Acute Toxicity

Maximum Daily Limit = 16

Average Weekly limit = 16

Average Monthly Limit = 16

The data are:

28

0.92

2.1

1.3

0.84

190

4

2.3

1.6

39

8

3.8

42

3.9

0

0

0

0

0

9/6/2013 5:08:16 PM

Facility = Madison Wood Preservers -- Outfall 002

Chemical = Chromium VI

Chronic averaging period = 4

WLAa = 16

WLAc = 11

Q.L. = 0.5

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 2

Expected Value = 3.75

Variance = 5.0625

C.V. = 0.6

97th percentile daily values = 9.12531

97th percentile 4 day average = 6.23921

97th percentile 30 day average = 4.52269

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

0.9

6.6



9/9/2013 11:20:43 AM

Facility = Madison Wood Preservers -- Outfall 001

Chemical = Copper

Chronic averaging period = 4

WLAa = 6.2

WLAc = 4.4

Q.L. = .5

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 16

Expected Value = 5.77822

Variance = 68.1746

C.V. = 1.428951

97th percentile daily values = 25.0094

97th percentile 4 day average = 15.7347

97th percentile 30 day average = 8.61378

# < Q.L. = 1

Model used = delta lognormal

A limit is needed based on Acute Toxicity

Maximum Daily Limit = 6.2

Average Weekly limit = 6.2

Average Monthly Limit = 6.2

The data are:

0.95

0.94

2.4

3

0.78

4.8

15

2.3

7.4

12

1.7

3.5

19

2.8

9.9

0.018

9/9/2013 11:22:10 AM

Facility = Madison Wood Preservers -- Outfall 002

Chemical = Copper

Chronic averaging period = 4

WLAa = 6.2

WLAc = 4.4

Q.L. = .5

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 9

Expected Value = 1.15140

Variance = .477263

C.V. = 0.6

97th percentile daily values = 2.80184

97th percentile 4 day average = 1.91569

97th percentile 30 day average = 1.38865

# < Q.L. = 1

Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

2.6

1.4

2.4

4.2

1.8

1.2

19

39

0.02

Madison Wood Preservers (VA0087696)

Outfall 001 Copper Values (4th Quarter 2008 -- 2nd Quarter 2013)

DMR Due Date	Concentration (µg/L)
10-Jul-13	0.95
10-Apr-13	<1
10-Jan-13	0.94
10-Oct-12	2.4
10-Jul-12	3
10-Apr-12	0.78
10-Oct-11	4.8
10-Jul-11	15
10-Apr-11	2.3
10-Jan-11	7.4
10-Oct-10	12
10-Jul-10	1.7
10-Apr-10	3.5
10-Jan-10	19
10-Oct-09	2.8
10-Jul-09	9.9
10-Apr-09	<0.005
10-Jan-09	0.018

Outfall 002 Copper Values (2nd Semiannual Period 2008 -- 1st Semiannual Period 2013)

DMR Due Date	Concentration (µg/L)
11-Jul-13	2.6
10-Jan-13	<1
10-Jul-12	1.4
9-Jan-12	2.4
7-Jul-11	4.2
11-Jan-11	1.8
9-Jul-10	1.2
8-Jan-10	19
9-Jul-09	39
12-Jan-09	0.02

Madison Wood Preservers (VA0087696)

Outfall 001 Chromium Values (4th Quarter 2008 -- 2nd  
Quarter 2013)

DMR Due Date	Concentration (µg/L)
10-Jul-13	28
10-Apr-13	<1
10-Jan-13	0.92
10-Oct-12	2.1
10-Jul-12	1.3
10-Apr-12	0.84
10-Jan-12	190
10-Oct-11	4
10-Jul-11	2.3
10-Apr-11	1.6
10-Jan-11	39
10-Oct-10	8
10-Jul-10	<1
10-Apr-10	3.8
10-Jan-10	42
10-Oct-09	3.9
10-Jul-09	<5
10-Apr-09	<0.005
10-Jan-09	<0.005

Outfall 002 Chromium Values (2nd Semiannual Period 2008 -- 1st Semiannual Period  
2013)

DMR Due Date	Concentration (µg/L)
10-Jul-13	<1
10-Jan-13	<1
10-Jul-12	<1
10-Jan-12	<1
10-Jul-11	0.9
10-Jan-11	<1
10-Jul-10	<1
10-Jan-10	6.6
10-Jul-09	<5
10-Jan-09	<0.005

Madison Wood Preservers (VA0087696)

Outfall 001 Arsenic Values (4th Quarter 2008 -- 2nd  
Quarter 2013)

DMR Due Date	Concentration (µg/L)
10-Jul-13	<1
10-Apr-13	<1
10-Jan-13	1.5
10-Oct-12	1
10-Jul-12	2.8
10-Apr-12	<1
10-Jan-12	37
10-Oct-11	4.1
10-Jul-11	2
10-Apr-11	1.1
10-Jan-11	8.9
10-Oct-10	18
10-Jul-10	1
10-Apr-10	1.9
10-Jan-10	11
10-Oct-09	<5
10-Jul-09	<5
10-Apr-09	<0.005
10-Jan-09	<0.005

Outfall 002 Arsenic Values (2nd Semiannual Period 2008 -- 1st Semiannual  
Period 2013)

DMR Due Date	Concentration (µg/L)
10-Jul-13	<1
10-Jan-13	<1
10-Jul-12	<1
10-Jan-12	<1
10-Jul-11	3.2
10-Jan-11	<1
10-Jul-10	<1
10-Jan-10	4.3
10-Jul-09	5.6
10-Jan-09	<0.005

**Madison Wood Preservers (VA0087696)**

**Outfall 001 Ethanolamine Values (4th Quarter 2008 -- 2nd  
Quarter 2013)**

<b>DMR Due Date</b>	<b>Concentration (µg/L)</b>
10-Jul-13	<251
10-Jan-13	<250
10-Jul-12	<125
10-Jan-12	46
10-Jul-11	<4000
10-Jan-11	<4000
10-Jul-10	<5000
10-Jan-10	<96000
10-Jul-09	<2300

**Outfall 002 Ethanolamine Values (2nd Semiannual Period  
2008 -- 1st Semiannual Period 2013)**

<b>DMR Due Date</b>	<b>Concentration (µg/L)</b>
10-Jul-13	<251
10-Jan-13	<500
10-Jul-12	<125
10-Jan-12	35
10-Jul-11	<4000
10-Jan-11	<4000
10-Jul-10	<10000
10-Jan-10	<98000
10-Jul-09	<2400
10-Jan-09	<5

**Madison Wood Preservers (VA0087696)**

**Outfall 001 COD Values (4th Quarter 2008 -- 2nd  
Quarter 2013)**

<b>DMR Due Date</b>	<b>Concentration (mg/L)</b>
10-Jul-13	22
10-Apr-13	<12.8
10-Jan-13	180
10-Oct-12	33
10-Jul-12	31
10-Apr-12	<20
10-Jan-12	171
10-Oct-11	41
10-Jul-11	30
10-Apr-11	<20
10-Jan-11	52
10-Oct-10	97
10-Jul-10	<20
10-Apr-10	34
10-Jan-10	33
10-Oct-09	53
10-Jul-09	165
10-Apr-09	<20
10-Jan-09	147
<b>Maximum</b>	<b>180</b>
<b>Average</b>	<b>78</b>

**Outfall 002 COD Values (2nd Semiannual  
Period 2008 -- 1st Semiannual Period 2013)**

<b>DMR Due Date</b>	<b>Concentration (mg/L)</b>
10-Jul-13	<20
10-Jan-13	20
10-Jul-12	<20
10-Jan-12	<20
10-Jul-11	29
10-Jan-11	<20
10-Jul-10	<20
10-Jan-10	21
10-Jul-09	65.7
10-Jan-09	36
<b>Maximum</b>	<b>66</b>
<b>Average</b>	<b>34</b>

Madison Wood Preservers (VA0087696)

Outfall 001 Pentachlorophenol Values (Monthly Sampling  
Oct 2008 -- Jul 2013)

Outfall 002 Pentachlorophenol Values (2nd  
Semiannual Period 2008 -- 1st Semiannual  
Period 2013)

DMR Due Date Concentration (µg/L)

10-Aug-13	<10
10-Jul-13	<10
10-Jun-13	<10
10-May-13	<10
10-Apr-13	<10
10-Mar-13	<10
10-Feb-13	<10
10-Jan-13	<10
10-Nov-12	8
10-Oct-12	7.6
10-Sep-12	<10
10-Aug-12	<10
10-Jul-12	8.5
10-Jun-12	<10
10-May-12	<10
10-Apr-12	<10
10-Mar-12	<10
10-Feb-12	<10
10-Jan-12	<10
10-Dec-11	<10
10-Nov-11	<10
10-Oct-11	<10
10-Sep-11	<10
10-Aug-11	<10
10-Jul-11	<10
10-Jun-11	<10
10-May-11	<10
10-Apr-11	<10
10-Mar-11	8
10-Feb-11	<10
10-Jan-11	<10
10-Dec-10	<10
10-Nov-10	<10
10-Oct-10	<10
10-Sep-10	<10
10-Aug-10	<10
10-Jul-10	<10
10-Jun-10	<10
10-May-10	<10

DMR Due Date Concentration (µg/L)

10-Jul-13	<10
10-Jan-13	<10
10-Jul-12	<10
10-Jan-12	<10
10-Jul-11	<10
10-Jan-11	<10
10-Jul-10	<10
10-Jan-10	<10
10-Jul-09	<10
10-Jan-09	<0.010
10-Jul-08	<0.010
10-Jan-08	<0.010



10-Apr-10	<10	
10-Mar-10	<10	
10-Feb-10	<10	
10-Jan-10	<10	
10-Dec-09	<10	
10-Nov-09	9	
10-Oct-09	8	
10-Sep-09	2.1	
10-Jul-09	<10	
10-Jun-09	<10	
10-May-09	<0.010	mg/L
10-Apr-09	<0.010	mg/L
10-Mar-09	<0.010	mg/L
10-Feb-09	<0.010	mg/L
10-Jan-09	<0.010	mg/L
10-Dec-08	<0.010	mg/L
10-Nov-08	<0.010	mg/L
10-Oct-08	0.017	mg/L

## Public Notice – Environmental Permit

**PURPOSE OF NOTICE:** To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater/stormwater into a water body in Madison County, Virginia.

**PUBLIC COMMENT PERIOD:** November 8, 2013 to December 9, 2013

**PERMIT NAME:** Virginia Pollutant Discharge Elimination System Permit – Stormwater issued by DEQ, under the authority of the State Water Control Board

**APPLICANT NAME, ADDRESS AND PERMIT NUMBER:** Mr. Randell Lillard, Regulatory Compliance Office, Madison Wood Preservers, 216 Oak Park Road, Madison, VA VA0087696

**NAME AND ADDRESS OF FACILITY:** Madison Wood Preservers, Inc., 216 Oak Park Road, Madison, VA 22727

**PROJECT DESCRIPTION:** Madison Wood Preservers, Inc. has applied for a reissuance of a permit for the private Madison Wood Preservers, Inc. industrial storm water discharge. The applicant proposes to release industrial storm water from a wood treatment facility at a variable rate per rain event into a waterbody. The facility proposes to release the industrial storm water into an unnamed tributary of Little Dark Run in Madison County in the Rappahannock River Watershed. A watershed is the land area drained by a river and its incoming streams. The permit will monitor the following pollutants in storm water and groundwater to protect water quality: chromium, copper, arsenic, chemical oxygen demand, total hardness, total organic carbon, total dissolved solids, and pentachlorophenol; and it will limit pH in the industrial storm water discharge.

**HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING:** DEQ accepts comments and requests for public hearing by hand-delivery, e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

**CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:** The public may review the draft permit and application at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Anna T. Westernik

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3827 E-mail:anna.westernik@deq.virginia.gov Fax: (703) 583-3821